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EXAMINER
KASSA, HILINA S

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>30 July 2003</u>.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,3-8,10-15 and 19-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,3-8,10-15 and 19-24* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>30 July 2003</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Preliminary Amendment

1.   The preliminary amendment filed on 07/30/03 has been acknowledged.

Claim Objections

2.   Claim 12 is objected to because of the following informalities:

In claim 12, line 3, "should" should be changed to "is", as it renders the scope of

the claim to be indefinite.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1 and 3-4 rejected under 35 U.S.C. 102(e) as being anticipated by

McIntyre (US Patent Number 6,724,496 B1).

(1) regarding claim 1:

As disclosed in figure 1 and 3, McIntyre discloses a printing system comprising: a

processor (24, figure1) configured to generate a rasterized print job from a print job

(column 2, lines 65-67, column 3, lines 1-4);

a storage device (26, figure 1) coupled to the processor and configured to store

the rasterized print job, said storage device located externally of the processor (column

2, lines 66-67, column 3, lines 1-4); and

an image producing device configured to receive the rasterized print job from the

storage device, and wherein the image producing device is external of the processor

and the storage device (column 3, lines 1-4, lines 14-17).

(2) regarding claim 3:

McIntyre further discloses, wherein said storage device is configured to store

and retrieve a plurality of rasterized print jobs generated by said processor (column 2,

lines 65-67; column 3, lines 1-4) and said system further comprises:

a plurality of image producing devices, said plurality of image producing devices

being in communication with a network (column 3, lines 18-21, lines 31-36).

(3) regarding claim 4:

McIntyre further discloses, further comprising:

one or more print job generators, each print job generator being configured to generate a print job, said print job generators being in communication with a network (column 3, lines 27-36).

5.   Claims 8, 10, 15, 19-20 and 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Vatland et al. (US Patent Number 6,091,507).

(1) regarding claim 8:

As shown in figure 1, Vatland et al. disclose an image producing device comprising:

a processor with software configured to receive an instruction and, in response to said instruction (18, figure 1), retrieve a print job from a storage device external to said image producing device (column 2, lines 59-67; column 3, lines 1-2); and

wherein said device is configured to generate a rasterized print job and send the rasterized print job to an external storage device (column 3, lines 5-11; lines 34-36).

(2) regarding claim 10:

Vatland et al. further disclose, wherein said software on said processor is configured to generate instructions relating to one or more print jobs and to send said instructions to at least one of an external storage device and/or another image producing device, through a network (column 3, lines 59-67; column 4, lines 1-2, lines 12-20).

(3) regarding claim 15:

Vatland et al. further disclose, a method for use in creating an image on print media said method comprising the steps of:

receiving an unrasterized print job from a device on a network (column 2, lines 55-66);

processing said unrasterized print job into a rasterized print job (column 3, lines 5-8);

sending the rasterized print job to an external storage device (column 3, lines 12-20);

retrieving the rasterized print job from the external storage device (column 3, lines 34-36); and

generating an image from said rasterized print job using an image producing device (column 3, lines 47-49).

(4) regarding claim 19:

Vatland et al. further disclose, receiving an instruction to retrieve a print job from an external storage device (column 3, lines 34-41).

(5) regarding claim 20:

Vatland et al. further disclose, determining whether a print job is stored on external storage device in rasterized form by checking a directory to determine whether

the rasterized print job is stored on an external storage device (column 5, lines 51-56;

lines 65-67; column 6, lines 1-9).

(6) regarding claim 22:

Vatland et al. further disclose, sending data to at least an external storage device

and/or a second image producing device (column 3, lines 12-20).

(7) regarding claim 23:

Vatland et al. further disclose, a printing system comprising:

means for printing including means for rasterizing a print job to produce a

rasterized print job (column 3, lines 5-8);

means for transmitting said rasterized print job externally of said means for

printing (column 3, lines 47-49);

means for storing said rasterized print job externally of said means for printing

(column 3, lines 12-20); and

means for retrieving said rasterized print job back to said means for printing

(column 3, lines 34-36).

(8) regarding claim 24:

Vatland et al. further disclose, a printing system comprising:

a processor configured to generate a rasterized print job from a print job (column

3, lines 5-8);

a storage device coupled to the processor and configured to store the rasterized

print job (column 5, lines 51-54), said storage device located externally of the processor

(column 5, lines 54-56); and

an image producing device configured to house the processor (78, figure 1;

column 6, lines 15-19).

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

McIntyre (US Patent Number 6,724,496 B1) in view of Vatland et al. (US Patent Number

6,091,507).

(1) regarding claim 5:

McIntyre discloses all of the subject matter as described above except for

teaching, a plurality of processors, each configured to receive a print job and generate a

rasterized print job from said print job and send said rasterized print job through a

network.

However, Vatland et al. teach a plurality of processors (18 and 20, figure 1), each

configured to receive a print job and generate a rasterized print job from said print job

and send said rasterized print job through a network (column 3, lines 12-20; lines 33-46).

Therefore it would have been obvious to one of ordinary skilled in the art at the time the invention was made to include the system as taught by Vatland et al., in which a plurality of processors, each configured to receive a print job and generate a rasterized print job from said print job and send said rasterized print job through a network, into the system of McIntyre because having multiple processors enhances reliability in order to rasterize the print job efficiently.

(2) regarding claim 6:

McIntyre discloses all of the subject matter as described above except for teaching, a print server to receive a print job from the one or more print job generators and cause a rasterized print job to be sent from the storage device.

However, Vatland et al. teach a print server to receive a print job from the one or more print job generators and cause a rasterized print job to be sent from the storage device (column 6, lines 47-52; column 7, lines 8-19; note that the storage device is part of the print job generators i.e. the computing device).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to include the system as taught by Vatland et al., in which a print server to receive a print job from the one or more print job generators and cause a rasterized print job to be sent from the storage device, into the system of McIntyre because such feature advances efficient control on the rasterized print job.

(3) regarding claim 7:

McIntyre discloses all of the subject matter as described above except for teaching, wherein said print server is further configured to cause a new rasterized print job to be stored on the storage device.

However, Vatland et al. teach wherein said print server is further configured to cause a new rasterized print job to be stored on the storage device (column 6, lines 42-54; column 7, 22-24; note that the print server performs the same function as the computer system).

Therefore, it would have been obvious to one of the ordinary skilled in the art at the time the invention was made to include the system as taught by Vatland et al., in which said print server is further configured to cause a new rasterized print job to be stored on the storage device, into the system of McIntyre because such feature enhances versatility.

8.   Claims 11-14 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vatland et al. (US Patent Number 6,091,507) in view of Berry et al. (US Patent Number 6,707,563 B1).

(1) regarding claim 11:

Vatland et al. disclose all of the subject matter as described above except for teaching wherein said processor is configured to merge two separate print jobs into a single print job, where at least one of said print jobs is received from an external storage device.

However, Berry et al. teach wherein said processor is configured to merge two separate print jobs into a single print job, where at least one of said print jobs is received from an external storage device (column 4, lines 24-29; lines 50-58).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to include the device as taught by Berry et al., in which said processor is configured to merge two separate print jobs into a single print job, where at least one of said print jobs is received from an external storage device, into the device of Vatland et al. because such feature advances flexibility.

(2) regarding claims 12 and 21:

Vatland et al. further disclose a method for use in creating an image on print media said method comprising the steps of:

determining that a print job should be divided among multiple image producing devices (column 7, lines 8-23);

Vatland et al. disclose all of the subject matter as described above except for teaching, sending said print job to multiple image producing devices.

However, Berry et al. teach sending said print job to multiple image producing devices (column 19, lines 49-65).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to include the method as taught by Berry et al., in which sending said print job to multiple image producing devices, into the method of Vatland et al. because such feature flexible and versatile to utilize.

(3) regarding claim 13:

Vatland et al. further disclose, sending said print job to an external storage device with an instruction for an image producing device to execute said print job (column 3, lines 43-54);

(4) regarding claim 14:

Vatland et al. disclose all of the subject matter as described above except for teaching dividing said print job into segments for execution in multiple steps.

However, Berry et al. teach dividing said print job into segments for execution in multiple steps (column 4, lines 50-58).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to include the method as taught by Berry et al., in which dividing said print job into segments for execution in multiple steps, into Vatland et al. because such feature is efficient enough to and easier to for RIPing.

Conclusion

9.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Motamed et al. (US Patent Number 6,327,050 B1) disclose a multiple raster

image processor (RIP) system which enables faster system performance over multiple

processors includes a zero RIP feature consisting of a language interpreter sub-RIP that

interprets a print instruction file but does not process the graphics rendering steps or the

post-language processing operators.

Parker et al. (6,441,919 B1) disclose a technique for rendering reusable objects

and other objects includes rendering the reusable objects, storing the resulting raster

data in a cache, and then rendering and compositing a print area by painting the

reusable objects and the other objects in paint order into a frame buffer.

10.   Any inquiry concerning this communication or earlier communication from the

examiner should be directed to Hilina Kassa whose telephone number is (571) 270-

1676.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Shuwang Liu could be reached at (571) 272- 3036.

Any response to this action should be mailed to:

Commissioner of Patent and Trademarks .

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only) .
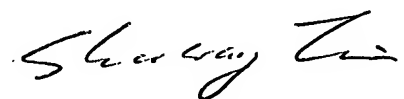
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the Technology Center 2600 Customer Service Office

whose telephone number is (703) 306-0377.

Hilina Kassa

May 22, 2007

SHUWANG LIU
SUPERVISORY PATENT EXAMINER